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I Hate Marking: An Innovative Use of Technology to Ease the Marking Day Blues

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Abstract:"I hate marking" reflects the feelings of many educators when faced with large piles of work to assess. This paper discusses the challenges and tensions in the assessment process, and considers ways of improving it, such as accommodating the learning styles of all stakeholders and incorporating technology. Two case studies are presented that include examples of how technology can be used in the assessment process to improve efficiency, streamline the administrative processes, and support the learning styles of students. The development of e-marking rubrics, podcasts and vodcasts are described as innovative ways to promote effective teaching and learning practices. Although these strategies are trialed in a tertiary setting, the methodology and technologies used can be adapted for any educational setting.

Introduction

Assessment is a time-consuming, expensive, often poorly managed, and stressful professional activity for both learners and educators. Whereas teaching, learning and assessment in Australia have changed over the last 20 years, there is evidence that much change is still needed to integrate and use the potential of new technologies in the area of teaching and learning (Commonwealth-Australia, 2007; Cranton, 1997). The driving forces for changes in education have been both internal and external, and have included factors such as: the increasing student population; the increasing use of part-time staff; a reduction in government funding; an increased expectation of institutional accountability, and the growing access and use of information and communication technologies (ICT) in teaching and learning (Hargreaves, 2003). Assessment has not escaped these changes, but in many cases has not kept up with exemplary and recommended practice. This is especially so in the area of task assessment, which involves professional judgement (Department of Education and Training, 2005).

This paper describes innovative assessment processes using new technologies in pre-service teacher education. Two case studies are presented showing how technology-based strategies and tools used in the assessment process have reduced teacher stress, raised student satisfaction levels, and promoted effective learning outcomes. These technology-based applications also illustrate how assessment can be a collaborative process, involving students, tutors, unit coordinators and the ICT developer.

The Assessment Process

Assessment is a core business activity in the education sector and is inextricably linked with what is taught and learnt. It is a complex activity, which makes significant demands on the time, resources and emotions of learners and staff. The current research literature on assessment practice in education indicates a high level of disquiet and concern (Skidmore, 2003). To distinguish between what the learner and the marker do during the assessment process, we use the terms assessment task for what the student does and task assessment for the activities carried out by staff, see **Figure 1.** The professional judgement of educators in the task assessment process is becoming even more important with the advent of student-centred, standards-based curricula and the use of authentic assessment tasks that are more subjective in nature. At the same time, paradoxically, stakeholders are demanding greater validity, reliability and transparency in the assessment process (Mayer, 2005). Meanwhile, current methods and practices used in the task assessment process that involve professional judgement have not kept pace with current best practice, nor do they involve the application of ICT to any great extent.

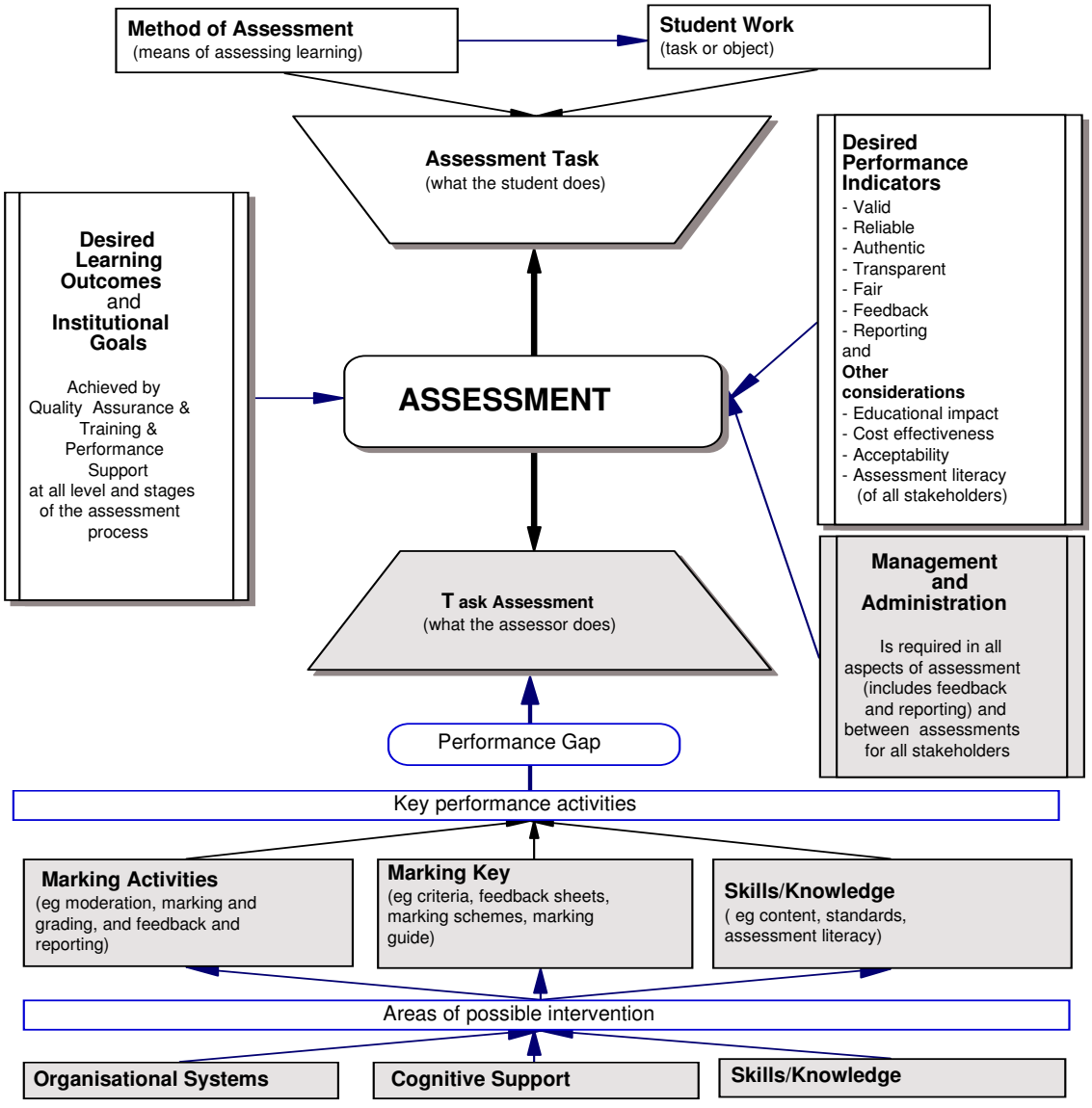

Figure 1: The Assessment Process at the Workplace Level.

Another significant educational assessment trend has been the expansion of the purpose of assessment from assessment **of l**earning, that is, marking, grading and accreditation, to educative assessment, that involves assessment **for** and **as** learning, see Figure 2. Biggs (1999), Black (2000), Brown (1999), Boud (1995a), Ramsden (1992), and Winter (2003), among others, have shown the significance of this new view of assessment for teaching and learning. This trend towards educative assessment has accentuated the shortcomings of the current assessment processes and practices involved in teaching and learning at all levels of education.

The Centre for the Study of Higher Education's Assessment is a core business activity in the education sector and is inextricably linked with what is taught and learnt. It is a complex activity, which makes significant demands on the time, resources and emotions of learners and staff. The current research literature on assessment practice in education indicates a high level of disquiet and concern (Skidmore, 2003). To distinguish between what the learner and the marker do during the assessment process, we use the terms assessment task for what the student does and task assessment for the activities carried out by staff, see Figure 1. The professional judgement of educators in the task assessment process is becoming even more important with the advent of student-centred, standards-based curricula and the use of authentic assessment tasks that are more subjective in nature. At the same time, paradoxically, stakeholders are demanding greater validity, reliability and transparency in the assessment process (Mayer, 2005). Meanwhile, current methods and practices used in the task assessment process that involve professional judgement have not kept pace with current best practice, nor do they involve the application of ICT to any great extent. publication *Assessing Learning in Australia*, commissioned by the Australian Universities Teaching Committee (James, McInnis, & Devlin, 2002) focuses on student assessment within Australian universities in 2002; one of its findings is that assessment practice is still often treated merely as the end-point of the teaching and learning process, that is as assessment **of** learning. This concern about assessment practice also culminated in the first Australian conference solely devoted to assessment and evaluation held in 2002, and the First International Conference on 'Enhancing Teaching and Learning through Assessment' held in Hong Kong in 2005 (Frankland, 2005).

Access to ICT facilities is growing continuously, and includes access to desktop and laptop computers, printers, networks, wireless technology, the Internet and email. For example, at Edith Cowan University our teaching experience and observation of other lecturers and students using ICT over many years has led us to conclude that ICT has been and is still being under-utilised in all areas of education. In particular this appears to be the case in the areas of marking key design, marking, moderation, feedback, reporting and management processes. Research evidence indicates that *the task assessment* process is currently a very time-consuming, costly and stressful one for both learners and staff when professional judgment is involved. While the clerical and administrative paperwork involved in assessment is important, time-consuming and complex, it often distracts and hinders good marking practice. These task assessment practices and processes currently involve very little use of ICT (McFarline, 2001).

When ICT is used in *task assessment*, it seems to be neither integrated, nor linked across the processes or activities. This is especially so where professional judgement is involved and when more than one assessor is involved. The proportion of staff at the institution where I work with an allocated laptop computer has grown from 11% in 2001, to 22% in 2004, 52% in 2005 to over 80% in 2008. However, whereas ICT facilities and

resources in higher education are becoming ubiquitous, staff use and productivity have not kept pace with this growth in access. This is no more so than in the area of assessment, where the application of ICT has been minimal (Bottino, 2004; Van Merriënboer, Jochems, & Koper, 2004). This lag in use of ICT mirrors the situation that the corporate sector in Australia, faced between 1978 and 1996 when, after increasing their investment in technology by 600%, very little increase in productivity was found (Stolovitch, 2000).

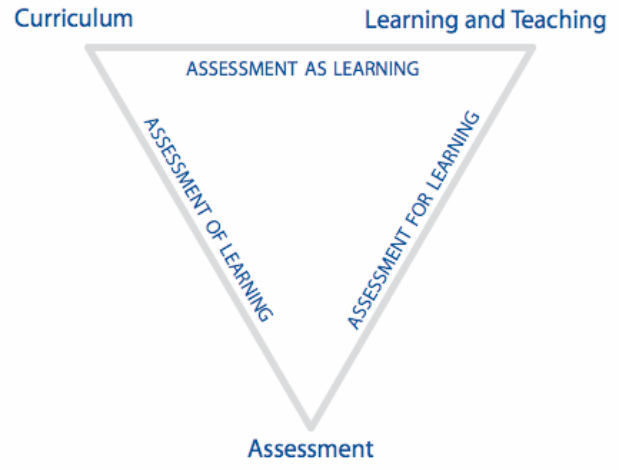

Figure 2: The Relationship of Assessment to Learning.

The current situation in the business sector is showing that once technology-based systems have been applied, supported and sustained over an extended period in workplace tasks, significant performance gains have been achieved (Gery, 1997; McManus & Rossett, 2006). Therefore, it seems reasonable to expect that similar performance gains could be achieved in education, considering the current investment in technology specifically in the field of *task assessment*. These performance gains might be achievable in areas such as accountability, transparency, reliability, validity, moderation, marking, feedback, reporting and management. As Gipps (2005) states, the "application of this technology could bring improvements in reliability and accuracy of marking, eradicate clerical errors, speed up the marking process and, possibly, reduce the cost" (p. 172). The performance gains could also result in reduced stress and workloads for teaching staff involved in the assessment process. Below a case study is presented in which a range of technology-based applications have been used to support the learning styles of students, and to improve the quality of teaching and learning and the effectiveness of the assessment process.

Case study 1

The aims

This study was conducted in the teacher education school at a university in Perth, Western Australia over a four-year period from 2004-2007. The teaching team worked from the premise that we were working in a knowledge-based society and that our students, future teachers needed to know how to teach and learn in a digital society. We wanted to empower our students by exposing them to a range of learning experiences using both high and low levels of technology. We felt that to simply fill their heads with more information in this knowledge-rich society would not necessarily help them in the future as, in the words of Quicke, "Our thinking has to take account of many aspects of a complex world, one which is

changing so rapidly that the questions about 'what to teach' are obsolete almost as soon as they have been asked"(Quicke, 1999).

The sample

The participants were in a core unit of study in the first-year course of a four-year degree in primary teacher education. The cohort comprised 260 students in 7 tutorial groups. The students came from a number of different cultural groups although the majority of the students were Australian. There were no students of aboriginal culture. The staff teaching in the unit consisted of one fulltime academic, the unit co-ordinator and 5 sessional staff members working as tutors. The sessional tutors were all experienced primary school teachers who had little experience in the use of technology in teaching.

The students completed a voluntary online survey at the beginning of the course. The survey results indicated that the students came from a variety of educational backgrounds and preferred to learn in a range of ways. A large number of the students indicated that they preferred to learn by viewing and or being actively involved in tasks. The students indicated that reading about a topic and listening to lectures on a topic were their least preferred ways of learning.

The plan

The academic team decided that instead of teaching theoretical approaches to the use of technology in educational settings, we would model to the students, different ways of integrating new technologies into the assessment process. (Very often in academic settings we tell the students about new or best practice but then continue to use traditional methods in our teaching.) The teaching team designed an academic unit based on the premise that we were working in a knowledge-based society and that future teachers needed to know how to teach and learn in a digital society. We wanted to empower our students by exposing them to a range of learning experiences using both high and low levels of technology. The teaching team supported ideas of Quicke (1999) that to simply fill the students` heads with more information would not necessarily help them in the future and as, in the words of Quicke, "Our thinking has to take account of many aspects of a complex world, one which is changing so rapidly that the questions about 'what to teach' are obsolete almost as soon as they have been asked"(Quicke, 1999).

The project

The project was implemented over four years using an action research model in which the work was continuously under review (plan, act, evaluate and revise). Consultations were held with all stakeholders: the program director, course co-ordinators, unit co-ordinators and tutors and students throughout the development phases. The academic staff worked closely with the designer and the students to create a product, which utilised technology to streamline the task assessment process. The teaching team guided by an ICT expert selected which technologies to use in the assessment process. The decision was based on student feedback gathered from data obtained in the UTEI, the unit teaching evaluation indicator. The UTEI is an independent anonymous survey in which students rate the teaching and learning processes

and practices in the units they have just completed. The UTEI data indicated that students felt that the assessment practices in this unit could be improved.

Electronic Marking Rubrics

This student feedback prompted teaching staff to trial new ways to improve levels of student satisfaction with the assessment practices in this unit. This desire to improve the assessment practices in the unit and thus boost student satisfaction while modeling the use of ICT, led to the combination of electronic marking and rubrics to improve quality, efficiency and student feedback. An electronic (online) moderation system was designed.

Through a collaborative process, a paper version of an instructional marking rubric was designed. This rubric was replicated electronically using Filemaker Pro 9 to include student data files and scores. Filemaker is a commercially available software program that was originally designed by Apple Computers. It is now able to work on both Mac and Pc platforms. This program enables the building and linking of multiple files in one database. These electronic assessment rubrics built in Filemaker could be accessed online or in a desktop version.

The electronic rubrics (EPSS) imported all relevant student data from the universities student management system (CMS), with the key field being the student ID number. The electronic system improved management by eliminating the “busy work”, that is, the clerical and administrative work, which can take up many hours of the educators` time. Each tutor was able to search for his or her own class in the EPSS. The EPSS allowed for multiple views of the data. The feedback from the tutors found that three views of the data were used most by the tutors: the student feedback view, the marking view and the spreadsheet view.

The movement between the views was by clicking on buttons on the webpage. All fields in the electronic data-base were searchable and storable. The usual process followed was to select a student from the spreadsheet, by selecting marking view from a dropdown menu. The marking screen would appear containing the marking rubric as seen below, Figure 3. The marker then needed to select the appropriate level for the item by clicking on the radio buttons (the little circles) on the rubric; this recorded a mark and which was automatically added to the total. An example of the digital marking rubric used in this unit follows:

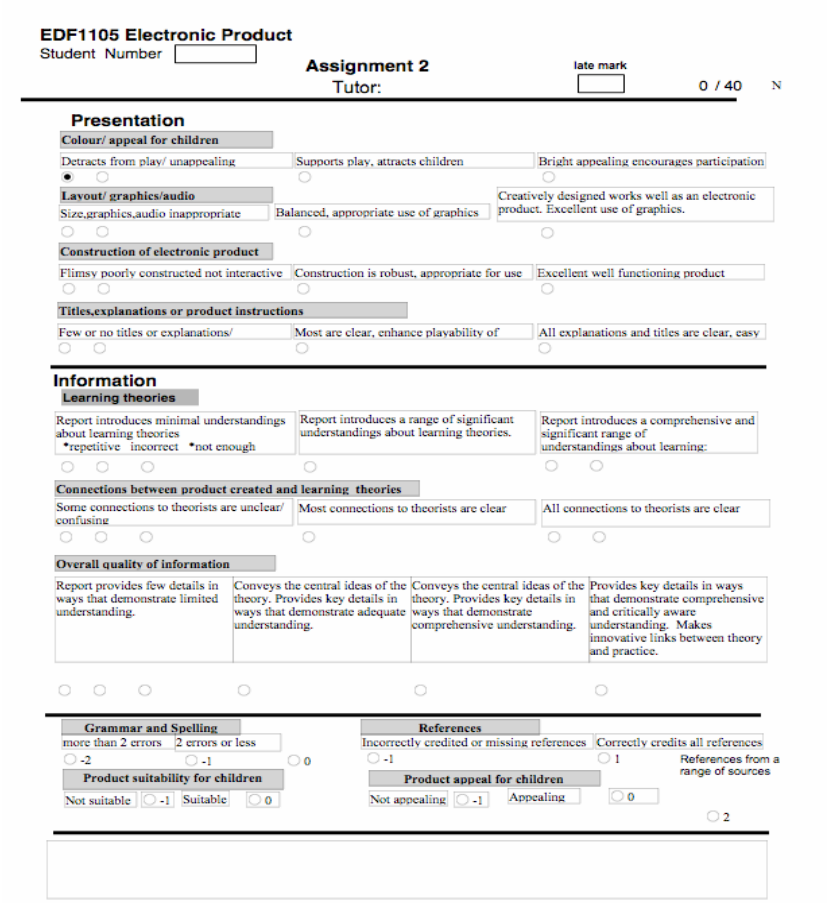

Figure 3: An example of an online marking rubric

The most recent version highlights the criteria selected by the marker, allowing the student to see what they had scored in each of the criteria. A comment box allowed the creation of individualised comments to personalise the feedback. There was also a roving comment box, which contained frequently used comments, which could be cut and pasted into the comments window. There was also a spell-check facility. All rubrics were automatically saved into a database and could be printed for student feedback or sent online. The database was searchable by name, student ID or keyword. This assisted in the management, collation and storage of data.

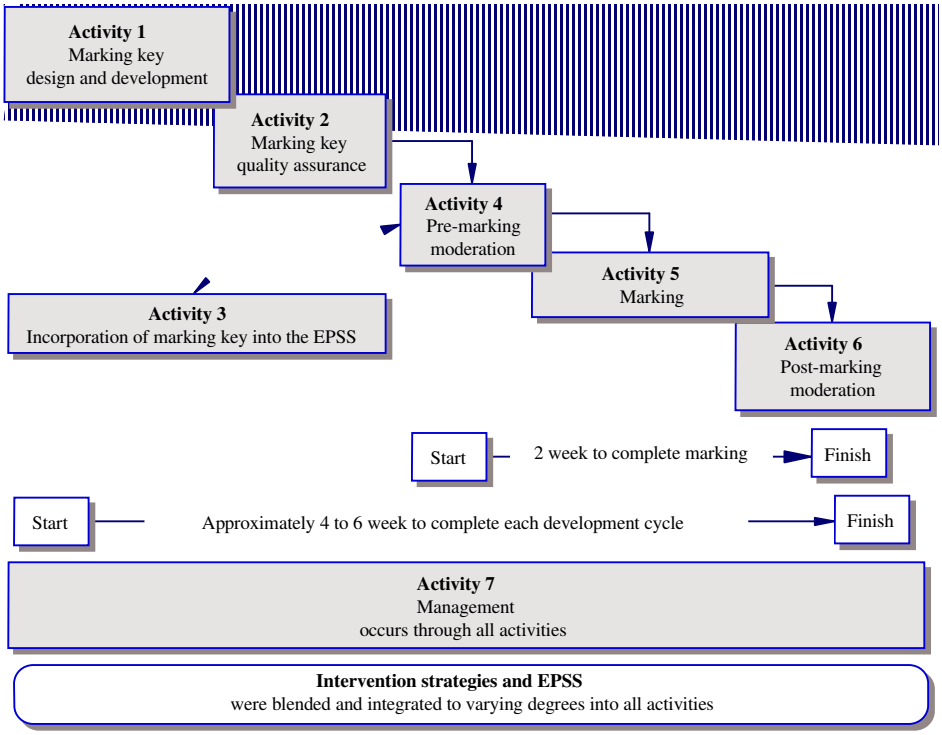

Figure 4: Task assessment activities.

The Evaluation of the use of Electronic Marking Rubrics

A number of methods were used to evaluate the use and effectiveness of the electronic marking rubrics. Semi-structured interviews and task observations were used to both develop and evaluate the product. Initially a user-centred design method was used to develop the product through an iterative prototype development process, as seen in figure 4. This involved many months of development and collaboration between the designer and the academic staff. Prototypes were developed and tested by the academic staff and student comment was invited. Changes were suggested, which improved the design of the product from an administrative perspective as well as a teaching and learning perspective.

The specific criteria included in the rubrics were given very clear descriptors to create instructional rubrics that could support teaching and learning. In addition to the online version for tutors, to support students in their learning, paper and e-copies of all instructional marking rubrics were made available to students prior to the assessment task, this is in-line with outcomes-based assessment philosophy. Students were intrigued with the electronic marking model; they had not come across it before. Many students commented that they used the learning outcomes as stated in the marking criteria to structure and guide their learning.

As a further support to enhance student learning, the online database allowed tutors and co-ordinators to track students` learning and to follow up on recommendations for additional learning support. At the end of the unit UTEI (unit teaching evaluation instrument), an independent evaluation of teaching done by the faculty for this unit, showed high levels of student support for the use of the EPSS .

Mean score on item 15: Assessment assisted my learning		
Semester 1 2005	50	Prior to the use of e-marking
Semester 1 2006	62	With the use of e-marking

Table 1: Mean scores pre and post the introduction of e-marking

These scores were significantly higher than the Faculty means of only 42 & 49.

"The use of electronic marking rubrics with clearly stated marking criteria has ensured high levels of student satisfaction with the unit and eliminated student appeals over assignment marks." (Comment from a lecturer using the e-marking rubrics)

"The electronic marking rubric and marking moderation meetings ensures that consistency across the unit is maintained. The team embraced new technology offered in the form of electronic marking rubrics, which has lessened the impact of tutor interpretation, as the rubric is criterion based." (Comment from a unit co-ordinator using the e-marking rubrics)

Advantages of Using Technology for Assessment vs. Traditional Paper-Based Methods

Currently in our institution unit co-ordinators have a range of assessment systems, the majority of which are paper-based. This makes the efficient keeping and management of records, for large units difficult and unwieldy. There is currently no uniform system of record management, which makes coordination between different tutors and the handover of information to new staff members difficult. A 15 point unit with a cohort of 265 students, each doing three assessment points per semester, will results in 795 paper-based records per semester. This would only include assessment records; there are also attendance records and tutor recommendations to be managed. For example, if a program director wanted information regarding a certain student's progress, it would take less than a minute using the integrated technology-based system to send them all the assessment records, comments and recommendations made by all the tutors as well as the students' attendance records. To collate all this information using a traditional paper-based system would be very problematic and time consuming, particularly in the current system where many university courses are taught by sessional staff who only come onto campus once a week to teach a class. Using the electronic system, all the information from multiple tutors would be available online in a password-protected site should the coordinator need the data.

With a little further development of the system, features such as highest, lowest and average marks for that assessment point could also be included in the electronic system. The benefits for students are in the quality control of teaching, learning and assessment procedures. This electronic system enables co-ordinators to monitor student progress more efficiently – particularly when dealing with large groups of students. For markers it saves a lot of time as the system fills in all student and unit details and adds all the marks and allocates grades. It automates the printing process, only taking minutes to print rubrics for the whole class. It also reduces time-consuming student appeals because all criteria, results and outcomes are clearly stated. It also eliminates marker errors as the scores are added up and totalled by the computer.

Case study 2: Podcasts and Vodcasts to Support Student Learning in the Assessment Process

A podcast is a digital media file, which is distributed over the Internet. These files can be in different formats, which allow them to be downloaded onto personal media players, for example as Ipods, or played on computers. Initially these files were audio or radio files but more recently technology has advanced so that enhanced podcasts can include images, documents and videos. The podcasts can be distributed in different ways. The use of RSS feeds or push technology allows users to subscribe to a series of podcasts whereby new episodes will be automatically "pushed" or downloaded onto their selected devices when they log onto i-tunes. Podcasts outputted in a video format are known as vodcasts, which can be saved in smaller file formats allowing them to be sent via email to all course participants. They can be viewed on any computer using the free download Apple QuickTime to open the files. This was the method one of the authors used for this project.

The rationale for the use of Podcasts and Vodcasts in the Assessment Process

In this case study vodcasting was used as a way of supporting student learning through the assessment process. The vodcasting project was designed in response to feedback from students indicating that they wanted learning support materials to be available in a range of formats so they could customise their learning to suit their own learning needs and styles. The current financial situation of many students required them to engage in many hours of paid work while completing their courses. Through the use of podcasts and vodcasts, students could access course materials while travelling to university or work using portable devices or complete their tasks anywhere by downloading them onto any computer.

Another challenge faced by academic staff is that students do not have the time or inclination to engage with large quantities of reading materials. As an educator, my aim was to get students to engage with the material. This prompted me to look for new ways to present learning materials which may be more suited to the learning styles and needs of the learners. When surveying the cohort, large numbers indicated that they had access to MP3 players, which supported the use of this technology as a medium to deliver course materials. All students in the group indicated that they had access to computers at home. A significant number had broadband access, and a few had dial-up modems. This prompted the decision to deliver selected material via vodcasts. The vodcasts were designed in a format so that they could be downloaded and viewed on a computer or an mp3 player. Technical challenges were to keep the file size small enough for those students who only had dial-up computer access, while still offering clear high-quality material.

The sample

The educational backgrounds of students in this course varied. In response to the teacher shortage in Western Australia, and the reduced enrolments in teacher education courses, the entry criteria to teacher education courses had been dropped (Department of Education and Training, 2006; Department of Treasury and Finance, 2007; ECU, 2007), and there were direct-entry pathways to teacher education courses for students who had not followed the traditional tertiary entrance courses of study. This provided a great challenge to the teaching team to deliver content at the correct level of challenge for the students. In this unit on educational psychology of the total number of 160 students approximately 30 were

direct-entry students, some were mature aged students and others had lower TER scores than in previous years. There was one student who identified herself as having special learning needs and needing extra support. This necessitated higher levels of support for students to attain the required educational outcomes.

Vodcasts to Promote Effective Learning for Students

The technology was used to deliver additional unit content to support students before and during the assessments process. The teaching team used the vodcasts to guide students through the assessment tasks. Through feedback from students, we were aware that many students failed assessment tasks because they did not know what was expected of them or they misinterpreted the assessment tasks. Vodcasts were designed to explain the assessment criteria and answer frequently asked questions. Visual examples of assessment tasks from previous cohorts were included with an audio track explaining key points. In another item, frequently made errors were described to guide students while preparing their work for assessment purposes. Students were guided both visually and verbally to first consider the assessment criteria and plan their work before beginning a task.

Vodcasts to Promote Effective Teaching

The vodcasts and podcasts catered for diversity in the cohort, allowing students to work at their own pace while reviewing the materials. They could pause the presentation and replay sections when needed. In this way the students were encouraged to engage and control their own learning. This meant that students with barriers to learning, visual or auditory processing difficulties, and language difficulties, as well as those with work or family commitments, were able to have control over their own learning. The use of vodcasts to transmit essential assessment information prior to the lectures allowed the lecturer to use contact time, such as lectures and tutorials, in a more focussed manner to engage students and extend their learning through higher order questioning and debate. I also used vodcasts after the lecture to deliver tailor-made information in response to the questions raised by the students in the lecture.

The use of Podcasts and Vodcasts to Reduce Stress and Workload for Staff and Students

The teaching staff in this unit, reported that the use of technology reduced their stress by reducing the workload. This was achieved by providing a vodcast to answer frequently asked questions. This saved time and reduced the stress for the tutors instead of them being constantly contacted by students asking the same questions, tutors could refer the students to the vodcast. Students also reported that the use of technology in this unit reduced their stress because they knew they had the help from the vodcasts anywhere and anytime they needed it. Students stated that by using the vodcasts the challenge of using new technologies to analyse digital videos was reduced, allowing them to engage with the academic challenge and use their time more effectively for learning. The teaching staff also noticed a vast improvement in academic standards over previous years, with most students successfully managing to negotiate the challenges of the assessment items. One of the academic staff in this unit

commented that the clarity of the vodcasts was most useful in assisting students and staff through difficult technical processes.

Vodcasts were also used to give addition support in completing assessment items. Examples of previous years' assignments were included with additional hints and tips on how to meet the assignment criteria. Students reported that this was most useful in that they could view the vodcasts at their time of need. A tutor in the unit stated that the use of technology provided equity, as it ensured that all students received the same level of support across multiple tutorial groups. As the unit co-ordinator, I have found the use of vodcasting and podcasting most successful and would like to experiment further with this technology next semester. My plan is to get the students engaged in creating their own vodcasts and podcasts as part of their learning experience.

Conclusion

The paper documents several ways in which technology has been used to support students learning styles, promote effective learning and reduce students' and educators' stress. The paper highlights innovative ways of customising technology to suit the teaching and learning aims of a specific unit. This use of new technologies is in-line with Australia's current strategic aims of using technology in education to promote quality learning and student engagement. The two case studies described in this paper show technology can improve task efficiency while maintaining academic quality and accountability in student learning and assessment. The use of technology in the assessment process raised student satisfaction levels as indicated in the UTEI scores. Hopefully these case studies will influence other educators to use technology to ease their marking-day blues.

References

Biggs, J. B. (1999). *Teaching for quality learning at university: what the student does*. Buckingham, UK: Open University Press.

Black, P. (2000). Research and the Development of Educational Assessment. *Oxford Review of Education, 26*(3-4), 408-419.

Bottino, R. S. (2004). The evolution of ICT-based learning environments: which perspectives for the school of the future? *British Journal of Educational Technology, 35*(5), 553-567.

Boud, D. J. (1995a). Assessment and learning: contradictory or complementary? In P. Knight (Ed.), *Assessment for Learning in Higher Education* (pp. 35-48). London: Kogan Page.

Brown, S., & Glasner, A. (1999). *Assessment matters in higher education: choosing and using diverse approaches*. Buckingham, UK: Open University Press.

Commonwealth-Australia. (2007). *Top of the class. .* Canberra: Parliament of the Commonwealth of Australia.

Cranton, P. (1997). *Universal challenges in faculty work: fresh perspectives from around the world*. San Francisco: Jossey-Bass Publishers.

Department of Education and Training, W. (2005). *Curriculum, Assessment and Reporting K-10. Policy and Guidelines.* Retrieved. from www.det.wa.edu.au.

Department of Education and Training, W. (2006). Teacher supply and demand and student placements in Western Australia- Strategic Issues. Retrieved 4/12/07, 2007, from http://www.aspa.asn.au/policies/poltech.htm

Department of Treasury and Finance, W. (2007). Labour Force October 2007. Retrieved 5/12/07, 2007, from http://www.dtf.wa.gov.au/cms/dtf_index.asp

ECU, E. C. U. (2007). *TISC First Preferences Summary as at 20007/11/29*. Perth: Edith Cowan University.

Frankland, S. (2005). The First International Conference on Enhancing Teaching and Learning through Assessment. Retrieved June 26, 2006, from http://www.polyu.edu.hk/assessment/

Gery, G. (1997). Electronic Performance Support Systems: How and Why to Remake the Workplace Through the Strategic Application of Technology. Retrieved May 3, 2005, from http://foldoc.doc.ic.ac.uk/foldoc/foldoc.cgi?EPSS

Gipps, C. V. (2005). What is the role for ICT-based assessment in university? *Studies in Higher Education, 30*(2), 171-180.

Hargreaves, A. (2003). *Teaching in the Knowledge Society*. Maidenhead: Open University Press.

James, R., McInnis, C., & Devlin, M. (2002). *Assessing Learning in Australian Universities*. Victoria, AUS: Center for the Study of Higher Education.

Mayer, D. (2005). Reviving the "policy bargin" Discussion. Professional accountability and the contribution of teacher performance assessment. *The Clearing House, 78*(4), 177-181.

McFarline, A. (2001). Perspectives on the relationships between ICT and Assessment. *Journal of computer Assisted Learning, 17*, 227-234.

McManus, P., & Rossett, A. (2006). Performance Support Tools. *Performance Improvement, 45*(2), 8-18.

Quicke, J. (1999). *Introduction:the curriculum and reflective modernity. In A curriculum for life: schools for a democratic learning society*. Buckingham: Open University Press.

Ramsden, P. (1992). *Learning to Teach in Higher Education*. London: Routledge.

Skidmore, P. (2003). *Beyond Measure, why educational assessment is failing the test*. London: Demos.

Stolovitch, H. (2000). Human Performance Technology: Research and Theory to Practice. *Performance Improvement, 39*(4), 7-16.

Van Merriënboer, J. G., Jochems, W., & Koper, R. (2004). *Integrated e-learning: implications for pedagogy, technology and organization*. New York: RoutledgeFalmer.

Winter, R. (2003). Contextualizing the Patchwork Text: Addressing Problems of Coursework Assessment in Higher Education. *In ovations in Education and teaching International, 40*(2), 112-122.